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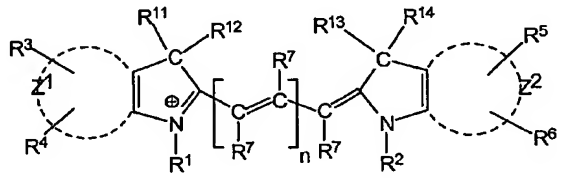
(54) Title: CYANINE DYE LABELLING REAGENTS



(I)

(57) Abstract: Disclosed are cyanine dyes that are useful for labeling and detecting biological and other materials. The dyes are of formula (I) in which groups R^3 and R^4 are attached to the Z^1 ring structure and groups R^5 and R^6 are attached to the Z^2 ring structure, and n = 1, 2 or 3; Z^1 and Z^2 independently represent the carbon atoms necessary to complete a one ring, or two-fused ring aromatic system; at least one of groups R^1, R^2, R^3, R^4, R^5, R^6 and R^7 is the group -E-F where E is a single bond or a spacer group and F is a target bonding group; one or more of groups R^{11}, R^{12}, R^{13} and R^{14} are independently selected from the group $-(CH_2)_k$-W, where W is sulphonic acid or phosphonic acid and k is an integer from 1 to 10. The dyes may be used in fluorescence labeling applications, where the presence of one and preferably multiple water solubilising groups attached to the 3-position of the indolinium ring reduces dye-dye interactions, and hence dye-dye quenching, particularly where multiple dye molecules are attached to components such as nucleic acids, oligonucleotides, proteins and antibodies.

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